HP 3600 SI Switch Series

Data sheet

Product overview

The HP 3600 SI Switch Series delivers intelligent and resilient performance, security, and reliability for robust switching at the enterprise network edge. The series consists of Fast Ethernet and PoE/PoE+ switches, with features that can accommodate large enterprise and SMB applications. Secure, resilient connectivity and the latest traffic-prioritization technologies enhance converged networks. The switches are designed for improved flexibility and scalability.

Key features

- Robust switching at the enterprise network edge
- Static and RIP Layer 3 routing
- Automatic stacking with IRF
- Integrated and distributed security enforcement
- Enterprise-level nonblocking performance

Features and benefits

Quality of Service (QoS)

- **Broadcast control:** allows limitation of broadcast traffic rate to cut down on unwanted network broadcast traffic
- **Advanced classifier-based QoS:** classifies traffic using multiple match criteria based on Layer 2, 3, and 4 information; applies QoS policies such as setting priority level and rate limit to selected traffic on a per-port or per-VLAN basis
- **Powerful QoS feature:** supports the following congestion actions: strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), and WRED
- **Traffic policing:** supports Committed Access Rate (CAR) and line rate

Management

- **Friendly port names:** allow assignment of descriptive names to ports
- **Remote configuration and management:** is available through a secure Web browser or a command-line interface (CLI)
- **Manager and operator privilege levels:** enable read-only (operator) and read-write (manager) access on CLI and Web browser management interfaces
- **Command authorization:** leverages HWTACACS to link a custom list of CLI commands to an individual network administrator's login; also provides an audit trail
- **Secure Web GUI:** provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- **Multiple configuration files:** can be stored to the flash image
- **Complete session logging:** provides detailed information for problem identification and resolution
- **SNMPv1, v2c, and v3:** facilitate centralized discovery, monitoring, and secure management of networking devices
- **Remote monitoring (RMON):** uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group
- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** automated device discovery protocol provides easy mapping by network management applications
- **Management VLAN:** segments traffic to and from management interfaces, including CLI/telnet, a Web browser interface, and SNMP
- **Local and Remote Intelligent Mirroring:** mirrors traffic from a switch port to remote switch port anywhere on the network, or mirrors ACL-selected traffic to a local switch port
- **Device Link Detection Protocol (DLDP):** monitors a cable between two switches and shuts down the ports on both ends if the cable is broken, preventing network problems such as loops
- **Troubleshooting:** ingress and egress port monitoring enable network problem solving; virtual cable tests provide visibility into cable problems
- **sFlow (RFC 3176):** provides scalable ASIC-based wire-speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes
- **Remote Intelligent Mirroring:** mirrors ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote switch port anywhere on the network
- **IPv6 management:** future-proofs networking, as the switch is capable of being managed whether the attached network is running IPv4 or IPv6; supports pingv6, tracertv6, Telnetv6, TFTPv6, DNSv6, syslogv6, FTPv6, SNMPv6, DHCPv6, and RADIUS for IPv6

Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 and 10/100/1000 ports
- **Jumbo packet support:** supports up to 9216-byte frame size to improve the performance of large data transfers
- **Gigabit Ethernet uplinks:** dual-personality ports for either 10/100/1000 or mini-GBIC SFP connectivity for increased connectivity flexibility
- **High-density access:** provides up to 48 fixed 10/100BASE-T PoE or non-PoE ports in a Layer 2/Layer 3 switch

- **IEEE 802.3af Power over Ethernet (PoE) support:** simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location
- **Ethernet OAM:** provides a Layer 2 link performance and fault detection monitoring tool, which reduces failover and network convergence times
- **IEEE 802.3at Power over Ethernet (PoE+) support:** simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location

Performance

- **Nonblocking performance:** up to 17.6 Gbps nonblocking switching fabric provides wire-speed intra- and inter-module switching with up to 11.78 million pps throughput
- **Gigabit Ethernet interface:** provides a connection to the network that eliminates the network as a bottleneck
- **Hardware-based wire-speed access control lists:** feature-rich ACL implementation helps ensure high levels of security and ease of administration without impacting network performance

Resiliency and high availability

- **Separate data and control paths:** keeps control separated from services and keeps service processing isolated; increases security and performance
- **External redundant power supply:** provides high reliability
- **Smart link:** allows 50 ms failover between links
- **Spanning Tree/MSTP, RSTP:** provides redundant links while preventing network loops
- **Intelligent Resilient Framework (IRF) technology:** allows customers to build a simple and reliable architecture, reducing the number of IP addresses and configuration files to manage; RVSF addresses the OPEX problem that many customers are facing by simplifying the task of managing multiple devices, as well as eliminates the need for legacy protocols like STP, RSTP, MSPT, and VRRP, providing an active-active mode of operation for both Layer 2 and Layer 3 at every layer in the network
- **IEEE 802.3ad Link Aggregation Control Protocol (LACP):** supports up to 26 trunks, each with 8 links per trunk; supports static or dynamic groups
- **Virtual Router Redundancy Protocol (VRRP):** allows a group of routers to dynamically back each other up to create highly available routed environments
- **Ring Resiliency Protection Protocol (RRPP):** provides standard sub 50 ms recovery for ring Ethernet-based topology

Manageability

- **RMON (remote monitoring):** provides advanced monitoring and reporting capabilities for statistics, history, alarms, and events

Layer 2 switching

- **16/32K MAC address table:** provides access to many Layer 2 devices
- **VLAN support and tagging:** support IEEE 802.1Q with 4,094 simultaneous VLAN IDs
- **GARP VLAN Registration Protocol:** allows automatic learning and dynamic assignment of VLANs
- **IEEE 802.1ad QinQ and Selective QinQ:** increase the scalability of an Ethernet network by providing a hierarchical structure; connect multiple LANs on a high-speed campus or metro network
- **Gigabit Ethernet port aggregation:** allows grouping of ports to increase overall data throughput to a remote device
- **IP multicast snooping:** automatically prevents flooding of IP multicast traffic
- **Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) protocol snooping:** effectively control and manage the flooding of multicast packets in a Layer 2 network

Layer 3 services

- **Address Resolution Protocol (ARP):** determines the MAC address of another IP host in the same subnet
- **Dynamic Host Configuration Protocol (DHCP):** simplifies the management of large IP networks; supports client; DHCP Relay enables DHCP operation across subnets
- **Loopback interface address:** defines an address in RIP that can always be reachable, improving diagnostic capability

- **User Datagram Protocol (UDP) helper function:** allows UDP broadcasts to be directed across router interfaces to specific IP unicast or subnet broadcast addresses and prevents server spoofing for UDP services such as DHCP
- **Route maps:** provide more control during route redistribution; allow filtering and altering of route metrics

Layer 3 routing

- **IPv4 routing protocols:** support static routes and RIP
- **IPv6 routing protocols:** provide routing of IPv6 at wire speed; support static routes and RIPng
- **Bidirectional Forwarding Detection (BFD):** enables link connectivity monitoring and reduces network convergence time for VRRP, static routing, and IRF
- **IPv6 tunneling:** allows a smooth transition from IPv4 to IPv6 by encapsulating IPv6 traffic over an existing IPv4 infrastructure

Security

- **Access control lists (ACLs):** provides IP Layer 2 to Layer 4 traffic filtering; supports VLAN ACL and port ACL
- **Multiple user authentication methods:**
  - **IEEE 802.1X:** is an industry-standard method of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
  - **Web-based authentication:** similar to IEEE 802.1X, it provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant
  - **MAC-based authentication:** client is authenticated with the RADIUS server based on the client's MAC address
- **Identity-driven security and access control:**
  - **Per-user ACLs:** permits or denies user access to specific network resources based on user identity and time of day, allowing multiple types of users on the same network to access specific network services without risk to network security or unauthorized access to sensitive data
  - **Automatic VLAN assignment:** automatically assigns users to the appropriate VLAN based on their identities
- **Secure management access:** securely encrypts all access methods (CLI, GUI, or MIB) through SSHv2, SSL, and/or SNMPv3
- **Secure FTP:** allows secure file transfer to and from the switch; protects against unwanted file downloads or unauthorized copying of a switch configuration file
- **Guest VLAN:** similar to IEEE 802.1X, it provides a browser-based environment to authenticated clients
- **Endpoint Admission Defense (EAD):** provides security policies to users accessing a network
- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **Port isolation:** secures and adds privacy, and prevents malicious attackers from obtaining user information
- **STP BPDU port protection:** blocks Bridge Protocol Data Units (BPDUs) on ports that do not require BPDUs, preventing forged BPDU attacks
- **STP Root Guard:** protects the root bridge from malicious attacks or configuration mistakes
- **DHCP protection:** blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- **Dynamic ARP protection:** blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- **IP Source Guard:** filters packets on a per-port basis, which prevents illegal packets from being forwarded
- **RADIUS/HWTACACS:** eases switch management security administration by using a password authentication server
- **Multiple Customer Edge (MCE):** facilitates MPLS VPN network integration with support for up to 63 VPNs

Convergence

- **IEEE 802.1AB Link Layer Discovery Protocol (LLDP):** is an automated device discovery protocol that provides easy mapping of network management applications
- **LLDP-MED:** is a standard extension that automatically configures network devices, including LLDP-capable IP phones
- **LLDP-CDP compatibility:** receives and recognizes CDP packets from Cisco's IP phones for seamless interoperation
- **PoE allocations:** support multiple methods (automatic, IEEE 802.3af class, LLDP-MED, or user specified) to allocate PoE power for more efficient energy savings

- **Voice VLAN:** automatically assigns VLAN and priority for IP phones, simplifying network configuration and maintenance
- **IP multicast snooping (IGMP snooping):** automatically prevents flooding of IP multicast traffic
- **Multicast VLAN:** allows multiple VLANs to receive the same multicast traffic, reducing network bandwidth demand by eliminating multiple streams to each VLAN

Device support

- **Cisco prestandard PoE support:** detects and provides power to Cisco's prestandard PoE devices such as wireless LAN access points and IP phones

Additional information

- **Green initiative support:** provides support for RoHS and WEEE regulations
- **Green IT and power:** uses the latest advances in silicon development and shuts off unused ports to improve power efficiency

Warranty and support

- **Lifetime warranty:** for as long as you own the product with advance replacement and next-business-day delivery (available in most countries)*
- **Electronic and telephone support:** limited electronic and telephone support is available from HP; refer to www.hp.com/networking/warranty for details on the support provided and the period during which support is available
- **Software releases:** refer to www.hp.com/networking/warranty for details on the software releases provided and the period during which software releases are available for your product(s)

*Hardware warranties replacement for as long as you own the product, with next business day advance replacement (available in most countries). The disk drive included with HP Alliance One Advanced Services and Services zl Modules, HP Threat Management Services zl Module, HP AllianceOne Ext zl Mod w/Rvrbd Stlhd, HP E-MSM765zl Mobility Controller and HP Surv Brch Com zl Mod pwrby Msft Lync has a five-year hardware warranty. For details, refer to the Software license and hardware warranty statements at www.hp.com/networking/warranty.

Specifications

	HP 3600-24-PoE SI Switch (JD325A)	HP 3600-48-PoE SI Switch (JD327A)	HP 3600-24TP SI Switch (JD329A)
Ports	24 RJ-45 autosensing 10/100 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Media Type: Auto-MDIX; Duplex: half or full 4 SFP 1000 Mbps ports 1 RJ-45 serial console port	48 RJ-45 autosensing 10/100 PoE ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Media Type: Auto-MDIX; Duplex: half or full 4 SFP 1000 Mbps ports 1 RJ-45 serial console port	24 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full 2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIX; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 SFP 1000 Mbps ports 1 RJ-45 serial console port
Physical characteristics			
Dimensions	16.54(d) x 17.32(w) x 1.72(h) in. (42.0 x 44.0 x 4.36 cm) (1U height)	16.54(d) x 17.32(w) x 1.72(h) in. (42.0 x 44.0 x 4.36 cm) (1U height)	10.24(d) x 17.32(w) x 1.72(h) in. (26.0 x 44.0 x 4.36 cm) (1U height)
Weight	13.23 lb. (6 kg)	14.33 lb. (6.5 kg)	7.72 lb. (3.5 kg)
Memory and processor			
	64 MB SDRAM, 8 MB flash; packet buffer size: 32 MB	64 MB SDRAM, 8 MB flash; packet buffer size: 32 MB	64 MB SDRAM, 8 MB flash; packet buffer size: 32 MB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
Performance			
Latency	< 10 µs	< 10 µs	< 10 µs
Throughput	9.5 million pps (64-byte packets)	11.8 million pps (64-byte packets)	9.5 million pps (64-byte packets)
Routing/Switching capacity	12.8 Gbps	17.6 Gbps	12.8 Gbps
Routing table size	1088 entries	1088 entries	1088 entries
Environment			
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	10% to 90%, noncondensing	10% to 90%, noncondensing	10% to 90%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing	5% to 95%, noncondensing
Electrical characteristics			
Maximum heat dissipation	511 BTU/hr (539.11 kJ/hr)	563 BTU/hr (593.96 kJ/hr)	137 BTU/hr (144.54 kJ/hr)
Voltage	100-240 VAC	100-240 VAC	100-240 VAC
DC voltage	-52 to -55 VDC	-52 to -55 VDC	
Maximum power rating	450 W	820 W	40 W
PoE power	370 W	740 W	
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With AC input, the maximum power consumption is 450 W; PoE is 300 W. With DC input, the maximum power consumption is 430 W; PoE is 370 W.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). With AC input, the maximum power consumption is 465 W; PoE is 300 W.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance

Specifications (continued)

	HP 3600-24-PoE SI Switch (JD325A)	HP 3600-48-PoE SI Switch (JD327A)	HP 3600-24TP SI Switch (JD329A)
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E)	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E)	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E)
	3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E)	3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E)	3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E)
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E)	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E)	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E)
	3-year, 24x7 SW phone support, software updates (UV831E)	3-year, 24x7 SW phone support, software updates (UV831E)	3-year, 24x7 SW phone support, software updates (UV831E)
	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E)	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E)	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E)
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E)
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E)
	Installation with minimum configuration, system-based pricing (UX116E)	Installation with minimum configuration, system-based pricing (UX116E)	Installation with minimum configuration, system-based pricing (UX116E)
	Installation with HP-provided configuration, system-based pricing (UX117E)	Installation with HP-provided configuration, system-based pricing (UX117E)	Installation with HP-provided configuration, system-based pricing (UX117E)
	4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E)	4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E)	4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E)
	4-year, 4-hour onsite, 24x7 coverage for hardware (UV826E)	4-year, 4-hour onsite, 24x7 coverage for hardware (UV826E)	4-year, 4-hour onsite, 24x7 coverage for hardware (UV826E)
	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E)	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E)	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E)
	4-year, 24x7 SW phone support, software updates (UV832E)	4-year, 24x7 SW phone support, software updates (UV832E)	4-year, 24x7 SW phone support, software updates (UV832E)
	5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E)	5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E)	5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E)
	5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)	5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)	5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)
	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)
	5-year, 24x7 SW phone support, software updates (UV833E)	5-year, 24x7 SW phone support, software updates (UV833E)	5-year, 24x7 SW phone support, software updates (UV833E)
	3 Yr 6 hr Call-to-Repair Onsite (UW431E)	3 Yr 6 hr Call-to-Repair Onsite (UW431E)	3 Yr 6 hr Call-to-Repair Onsite (UW431E)
	4 Yr 6 hr Call-to-Repair Onsite (UW432E)	4 Yr 6 hr Call-to-Repair Onsite (UW432E)	4 Yr 6 hr Call-to-Repair Onsite (UW432E)
	5 Yr 6 hr Call-to-Repair Onsite (UW433E)	5 Yr 6 hr Call-to-Repair Onsite (UW433E)	5 Yr 6 hr Call-to-Repair Onsite (UW433E)
	1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)	1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)	1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)
	1-year, 24x7 software phone support, software updates (HR592E)	1-year, 24x7 software phone support, software updates (HR592E)	1-year, 24x7 software phone support, software updates (HR592E)
	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)
	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)
	3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)	3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)	3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)
	3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)	3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)	3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)
	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)

Specifications (continued)

	HP 3600-24-PoE SI Switch (JD325A)	HP 3600-48-PoE SI Switch (JD327A)	HP 3600-24TP SI Switch (JD329A)
	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E) 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E) Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E) 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E) Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E) 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E) Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.
Standards and protocols (applies to all products in series)	**Device management** RFC 1157 SNMPv1/v2c RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II RFC 2573 (SNMPv3 Applications) RFC 2578-2580 SMIv2 RFC 2819 (RMON groups Alarm, Event, History and Statistics only) RFC 3410 (Management Framework) RFC 3416 (SNMP Protocol Operations v2) RFC 3417 (SNMP Transport Mappings) HTML and telnet management Multiple Configuration Files SNMP v3 and RMON RFC support SSHv1/SSHv2 Secure Shell **General protocols** IEEE 802.1ad Q-in-Q IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1s (MSTP) IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.1X PAE IEEE 802.3 Type 10BASE-T IEEE 802.3ab 1000BASE-T IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3af Power over Ethernet IEEE 802.3i 10BASE-T IEEE 802.3u 100BASE-X IEEE 802.3x Flow Control IEEE 802.3z 1000BASE-X RFC 768 UDP RFC 783 TFTP Protocol (revision 2) RFC 791 IP RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 1058 RIPv1 RFC 1213 Management Information Base for Network Management of TCP/IP-based internets RFC 1812 IPv4 Routing	RFC 2131 DHCP RFC 2236 IGMP Snooping RFC 2338 VRRP RFC 2453 RIPv2 RFC 2644 Directed Broadcast Control RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types RFC 3410 Applicability Statements for SNMP RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3) RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP) RFC 3416 Protocol Operations for SNMP RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP) **MIBs** RFC 1213 MIB II RFC 1493 Bridge MIB RFC 1724 RIPv2 MIB RFC 1757 Remote Network Monitoring MIB RFC 1907 SNMPv2 MIB RFC 2233 Interface MIB RFC 2571 SNMP Framework MIB RFC 2572 SNMP-MPD MIB RFC 2573 SNMP-Notification MIB RFC 2573 SNMP-Target MIB RFC 2574 SNMP USM MIB RFC 2618 RADIUS Authentication Client MIB RFC 2620 RADIUS Accounting Client MIB RFC 2665 Ethernet-Like-MIB RFC 2674 802.1p and IEEE 802.1Q Bridge MIB RFC 2819 RMON MIB RFC 3414 SNMP-User based-SM MIB RFC 3415 SNMP-View based-ACM MIB **Network management** IEEE 802.1AB Link Layer Discovery Protocol (LLDP) RFC 1157 SNMPv1 RFC 1757 RMON 4 groups: Stats, History, Alarms and Events RFC 1901 SNMPv2 Introduction	RFC 1902 Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2) RFC 1903 SNMPv2 Textual Conventions RFC 1904 SNMPv2 Conformance RFC 1905 SNMPv2 Protocol Operations RFC 1906 SNMPv2 Transport Mappings RFC 2570 SNMPv3 Overview RFC 2571 An Architecture for Describing SNMP Management Frameworks RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP) RFC 2573 SNMP Applications RFC 2574 SNMPv3 User-based Security Model (USM) RFC 2575 SNMPv3 View-based Access Control Model (VACM) RFC 2578 Structure of Management Information Version 2 (SMIv2) RFC 2579 Textual Conventions for SMIv2 RFC 2580 Conformance Statements for SMIv2 RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events) RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework RFC 3414 SNMPv3 User-based Security Model (USM) RFC 3415 SNMPv3 View-based Access Control Model VACM) ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED) SNMPv1/v2c/v3

Specifications (continued)

	HP 3600-24 SI Switch (JD330A)	HP 3600-48 SI Switch (JD332A)
Ports	24 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full 4 SFP 1000 Mbps ports 1 RJ-45 serial console port	48 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full 4 SFP 1000 Mbps ports 1 RJ-45 serial console port
Physical characteristics		
Dimensions	10.24(d) x 17.32(w) x 1.72(h) in. (26.0 x 44.0 x 4.36 cm) (1U height)	10.24(d) x 17.32(w) x 1.72(h) in. (26 x 44 x 4.36 cm) (1U height)
Weight	7.72 lb. (3.5 kg)	8.82 lb. (4 kg)
Memory and processor		
	64 MB SDRAM, 8 MB flash; packet buffer size: 32 MB	64 MB SDRAM, 8 MB flash; packet buffer size: 32 MB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
Performance		
Latency	< 10 µs	< 10 µs
Throughput	9.5 million pps	11.8 million pps (64-byte packets)
Routing/Switching capacity	12.8 Gbps	17.6 Gbps
Routing table size	1088 entries	1088 entries
Environment		
Operating temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Operating relative humidity	10% to 90%, noncondensing	10% to 90%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Electrical characteristics		
Maximum heat dissipation	137 BTU/hr (144.54 kJ/hr)	171 BTU/hr (180.41 kJ/hr)
Voltage	100-240 VAC	100-240 VAC
Maximum power rating	40 W	50 W
Frequency	50/60 Hz	50/60 Hz
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E) 3-year, 24x7 SW phone support, software updates (UV831E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E) Installation with minimum configuration, system-based pricing (UX116E) Installation with HP-provided configuration, system-based pricing (UX117E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV826E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E) 4-year, 24x7 SW phone support, software updates (UV832E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E) 3-year, 24x7 SW phone support, software updates (UV831E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E) Installation with minimum configuration, system-based pricing (UX116E) Installation with HP-provided configuration, system-based pricing (UX117E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UV826E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E) 4-year, 24x7 SW phone support, software updates (UV832E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)

Specifications (continued)

	HP 3600-24 SI Switch (JD330A)	HP 3600-48 SI Switch (JD332A)
	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)
	5-year, 24x7 SW phone support, software updates (UV833E)	5-year, 24x7 SW phone support, software updates (UV833E)
	3 Yr 6 hr Call-to-Repair Onsite (UW431E)	3 Yr 6 hr Call-to-Repair Onsite (UW431E)
	4 Yr 6 hr Call-to-Repair Onsite (UW432E)	4 Yr 6 hr Call-to-Repair Onsite (UW432E)
	5 Yr 6 hr Call-to-Repair Onsite (UW433E)	5 Yr 6 hr Call-to-Repair Onsite (UW433E)
	1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)	1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)
	1-year, 24x7 software phone support, software updates (HR592E)	1-year, 24x7 software phone support, software updates (HR592E)
	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)
	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)
	3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)	3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)
	3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)	3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)
	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)
	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E)	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E)
	5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E)	5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E)
	5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E)	5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E)
	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Specifications (continued)

	HP 3600-24 SI Switch (JD330A)	HP 3600-48 SI Switch (JD332A)

Standards and protocols
(applies to all products in series)

Device management
RFC 1157 SNMPv1/v2c
RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II
RFC 2573 (SNMPv3 Applications)
RFC 2578-2580 SMIv2
RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
RFC 3410 (Management Framework)
RFC 3416 (SNMP Protocol Operations v2)
RFC 3417 (SNMP Transport Mappings)
HTML and telnet management
Multiple Configuration Files
SNMP v3 and RMON RFC support
SSHv1/SSHv2 Secure Shell

General protocols
IEEE 802.1ad Q-in-Q
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1s (MSTP)
IEEE 802.1v VLAN classification by Protocol and Port
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.1X PAE
IEEE 802.3 Type 10BASE-T
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3i 10BASE-T
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow Control
IEEE 802.3z 1000BASE-X
RFC 768 UDP
RFC 783 TFTP Protocol (revision 2)
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 1058 RIPv1
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
RFC 1812 IPv4 Routing
RFC 2131 DHCP
RFC 2236 IGMP Snooping
RFC 2338 VRRP
RFC 2453 RIPv2
RFC 2644 Directed Broadcast Control
RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types
RFC 3410 Applicability Statements for SNMP
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
RFC 3416 Protocol Operations for SNMP
RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 1724 RIPv2 MIB
RFC 1757 Remote Network Monitoring MIB
RFC 1907 SNMPv2 MIB
RFC 2233 Interface MIB
RFC 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2573 SNMP-Notification MIB
RFC 2573 SNMP-Target MIB
RFC 2574 SNMP USM MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2819 RMON MIB
RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 1157 SNMPv1
RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
RFC 1901 SNMPv2 Introduction
RFC 1902 Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 1903 SNMPv2 Textual Conventions
RFC 1904 SNMPv2 Conformance
RFC 1905 SNMPv2 Protocol Operations
RFC 1906 SNMPv2 Transport Mappings
RFC 2570 SNMPv3 Overview
RFC 2571 An Architecture for Describing SNMP Management Frameworks
RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
RFC 2573 SNMP Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 SNMPv3 View-based Access Control Model (VACM)
RFC 2578 Structure of Management Information Version 2 (SMIv2)
RFC 2579 Textual Conventions for SMIv2
RFC 2580 Conformance Statements for SMIv2
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework
RFC 3414 SNMPv3 User-based Security Model (USM)
RFC 3415 SNMPv3 View-based Access Control Model VACM)
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

Specifications (continued)

	HP 3600-24 v2 SI Switch (JG304A)	HP 3600-48 v2 SI Switch (JG305A)
Ports	24 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full	48 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Media Type: Auto-MDIX; Duplex: half or full
	4 SFP 1000 Mbps ports	4 SFP 1000 Mbps ports
	2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)	2 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)
	1 RJ-45 serial console port	1 RJ-45 serial console port
Physical characteristics		
Dimensions	10.24(d) x 17.32(w) x 1.72(h) in. (26.0 x 44.0 x 4.36 cm) (1U height)	10.24(d) x 17.32(w) x 1.72(h) in. (26 x 44 x 4.36 cm) (1U height)
Weight	11.02 lb. (5 kg)	8.82 lb. (4 kg)
Memory and processor		
	256 MB SDRAM, 128 MB flash; packet buffer size: 2 MB	256 MB SDRAM, 128 MB flash; packet buffer size: 4 MB
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included)
Performance		
100 Mb Latency	< 6 µs	< 6 µs
1000 Mb Latency	< 5 µs	< 5 µs
Throughput	9.5 million pps	13.1 million pps (64-byte packets)
Routing/Switching capacity	12.8 Gbps	17.6 Gbps
Routing table size	2048 entries	2048 entries
Environment		
Operating temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Acoustic	Low-speed fan: 39.5 dB, High-speed fan: 48.4 dB	Low-speed fan: 43.2 dB, High-speed fan: 50 dB
Electrical characteristics		
Maximum heat dissipation	89 BTU/hr (93.9 kJ/hr)	140 BTU/hr (147.7 kJ/hr)
Voltage	100-240 VAC	100-240 VAC
Maximum power rating	26 W	41 W
Frequency	50/60 Hz	50/60 Hz
Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance	UL 60950-1; EN 60825-1 Safety of Laser Products-Part 1; EN 60825-2 Safety of Laser Products-Part 2; IEC 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1/A11; FDA 21 CFR Subchapter J; ROHS Compliance
Emissions	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A	FCC part 15 Class A; VCCI Class A; EN 55022 Class A; CISPR 22 Class A; ICES-003 Class A; ANSI C63.4 2003; ETSI EN 300 386 V1.3.3; AS/NZS CISPR22 Class A; EN 61000-3-2; EN 61000-3-3; EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-11; EN 61000-3-2:2006; EN 61000-3-3:1995 +A1:2001+A2:2005; EMC Directive 2004/108/EC; FCC (CFR 47, Part 15) Class A
Management	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager	IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E)	3-year, 4-hour onsite, 13x5 coverage for hardware (UV822E)
	3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E)	3-year, 4-hour onsite, 24x7 coverage for hardware (UV825E)
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E)	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UV828E)
	3-year, 24x7 SW phone support, software updates (UV831E)	3-year, 24x7 SW phone support, software updates (UV831E)
	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E)	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR589E)
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR590E)
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E)	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR591E)
	4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E)	4-year, 4-hour onsite, 13x5 coverage for hardware (UV823E)
	4-year, 4-hour onsite, 24x7 coverage for hardware (UV826E)	4-year, 4-hour onsite, 24x7 coverage for hardware (UV826E)
	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E)	4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV829E)
	4-year, 24x7 SW phone support, software updates (UV832E)	4-year, 24x7 SW phone support, software updates (UV832E)

Specifications (continued)

	HP 3600-24 v2 SI Switch (JG304A)	HP 3600-48 v2 SI Switch (JG305A)
	5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E)	5-year, 4-hour onsite, 13x5 coverage for hardware (UV824E)
	5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)	5-year, 4-hour onsite, 24x7 coverage for hardware (UV827E)
	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)	5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UV830E)
	5-year, 24x7 SW phone support, software updates (UV833E)	5-year, 24x7 SW phone support, software updates (UV833E)
	3 Yr 6 hr Call-to-Repair Onsite (UW431E)	3 Yr 6 hr Call-to-Repair Onsite (UW431E)
	4 Yr 6 hr Call-to-Repair Onsite (UW432E)	4 Yr 6 hr Call-to-Repair Onsite (UW432E)
	5 Yr 6 hr Call-to-Repair Onsite (UW433E)	5 Yr 6 hr Call-to-Repair Onsite (UW433E)
	1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)	1-year, 6 hour Call-To-Repair Onsite for hardware (HR593E)
	1-year, 24x7 software phone support, software updates (HR592E)	1-year, 24x7 software phone support, software updates (HR592E)
	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)	1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS690E)
	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)	1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS691E)
	3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)	3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS692E)
	3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)	3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS693E)
	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)	4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS694E)
	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E)	4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS695E)
	5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E)	5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS696E)
	5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E)	5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS697E)
	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.	Refer to the HP website at www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

Specifications (continued)

Standards and protocols
(applies to all products in series)

HP 3600-24 v2 SI Switch (JG304A)
HP 3600-48 v2 SI Switch (JG305A)

Device management
RFC 1157 SNMPv1/v2c
RFC 1901-1907 SNMPv2c, SMIv2 and Revised MIB-II
RFC 2573 (SNMPv3 Applications)
RFC 2578-2580 SMIv2
RFC 2819 (RMON groups Alarm, Event, History and Statistics only)
RFC 3410 (Management Framework)
RFC 3416 (SNMP Protocol Operations v2)
RFC 3417 (SNMP Transport Mappings)
HTML and telnet management
Multiple Configuration Files
SNMP v3 and RMON RFC support
SSHv1/SSHv2 Secure Shell

General protocols
IEEE 802.1ad Q-in-Q
IEEE 802.1D MAC Bridges
IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1s (MSTP)
IEEE 802.1v VLAN classification by Protocol and Port
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.1X PAE
IEEE 802.3 Type 10BASE-T
IEEE 802.3ab 1000BASE-T
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3i 10BASE-T
IEEE 802.3u 100BASE-X
IEEE 802.3x Flow Control
IEEE 802.3z 1000BASE-X
RFC 768 UDP
RFC 783 TFTP Protocol (revision 2)
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 1058 RIPv1
RFC 1213 Management Information Base for Network Management of TCP/IP-based internets
RFC 1812 IPv4 Routing
RFC 2131 DHCP
RFC 2236 IGMP Snooping
RFC 2338 VRRP
RFC 2453 RIPv2
RFC 2644 Directed Broadcast Control
RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types
RFC 3410 Applicability Statements for SNMP
RFC 3414 User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415 View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
RFC 3416 Protocol Operations for SNMP
RFC 3417 Transport Mappings for the Simple Network Management Protocol (SNMP)

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 1724 RIPv2 MIB
RFC 1757 Remote Network Monitoring MIB
RFC 1907 SNMPv2 MIB
RFC 2233 Interface MIB
RFC 2571 SNMP Framework MIB
RFC 2572 SNMP-MPD MIB
RFC 2573 SNMP-Notification MIB
RFC 2573 SNMP-Target MIB
RFC 2574 SNMP USM MIB
RFC 2618 RADIUS Authentication Client MIB
RFC 2620 RADIUS Accounting Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2819 RMON MIB
RFC 3414 SNMP-User based-SM MIB
RFC 3415 SNMP-View based-ACM MIB

Network management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 1157 SNMPv1
RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
RFC 1901 SNMPv2 Introduction
RFC 1902 Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 1903 SNMPv2 Textual Conventions
RFC 1904 SNMPv2 Conformance
RFC 1905 SNMPv2 Protocol Operations
RFC 1906 SNMPv2 Transport Mappings
RFC 2570 SNMPv3 Overview
RFC 2571 An Architecture for Describing SNMP Management Frameworks
RFC 2572 Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
RFC 2573 SNMP Applications
RFC 2574 SNMPv3 User-based Security Model (USM)
RFC 2575 SNMPv3 View-based Access Control Model (VACM)
RFC 2578 Structure of Management Information Version 2 (SMIv2)
RFC 2579 Textual Conventions for SMIv2
RFC 2580 Conformance Statements for SMIv2
RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events)
RFC 3410 Introduction to Version 3 of the Internet-standard Network Management Framework
RFC 3414 SNMPv3 User-based Security Model (USM)
RFC 3415 SNMPv3 View-based Access Control Model VACM)
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

HP 3600 SI Switch Series accessories

Transceivers

HP X125 1G SFP LC LH40 1310nm Transceiver (JD061A)
HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A)
HP X125 1G SFP LC LH70 Transceiver (JD063B)
HP X120 1G SFP RJ45 T Transceiver (JD089B)
HP X120 1G SFP LC BX 10-U Transceiver (JD098B)
HP X120 1G SFP LC BX 10-D Transceiver (JD099B)
HP X170 1G SFP LC LH70 1550 Transceiver (JD109A)
HP X170 1G SFP LC LH70 1570 Transceiver (JD110A)
HP X170 1G SFP LC LH70 1590 Transceiver (JD111A)
HP X170 1G SFP LC LH70 1610 Transceiver (JD112A)
HP X170 1G SFP LC LH70 1470 Transceiver (JD113A)
HP X170 1G SFP LC LH70 1490 Transceiver (JD114A)
HP X170 1G SFP LC LH70 1510 Transceiver (JD115A)
HP X170 1G SFP LC LH70 1530 Transceiver (JD116A)
HP X120 1G SFP LC SX Transceiver (JD118B)
HP X120 1G SFP LC LX Transceiver (JD119B)

Cables

HP 3600 Switch SFP Stacking Kit (JD324B)
HP 0.5 m Multimode OM3 LC/LC Optical Cable (AJ833A)
HP 1 m Multimode OM3 LC/LC Optical Cable (AJ834A)
HP 2 m Multimode OM3 LC/LC Optical Cable (AJ835A)
HP 5 m Multimode OM3 LC/LC Optical Cable (AJ836A)
HP 15 m Multimode OM3 LC/LC Optical Cable (AJ837A)
HP 30 m Multimode OM3 LC/LC Optical Cable (AJ838A)
HP 50 m Multimode OM3 LC/LC Optical Cable (AJ839A)
NEW HP 0.5 m PremierFlex OM3+ LC/LC Optical Cable (BK837A)
NEW HP 1 m PremierFlex OM3+ LC/LC Optical Cable (BK838A)
NEW HP 2 m PremierFlex OM3+ LC/LC Optical Cable (BK839A)
NEW HP 5 m PremierFlex OM3+ LC/LC Optical Cable (BK840A)
NEW HP 15 m PremierFlex OM3+ LC/LC Optical Cable (BK841A)
NEW HP 30 m PremierFlex OM3+ LC/LC Optical Cable (BK842A)
NEW HP 50 m PremierFlex OM3+ LC/LC Optical Cable (BK843A)

Power Supply

HP RPS1600 Redundant Power System (JG136A)
HP RPS1600 1600W AC Power Supply (JG137A)

Power cords

HP X290 1000 A JD5 2m RPS Cable (JD187A)

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